

## ABSTRACT

In an optical transmission system in which a pulse signal is converted into an optical signal before transmission, a pulse signal demodulation device capable of correctly demodulating the 5 pulse signal is provided. An optical-to-electrical conversion section (31) converts a received optical signal into an electrical signal, and outputs the electrical signal as a received signal. A reception waveform information calculating section (33) outputs, as reception waveform information, information about a shape of 10 a waveform of a short-pulse signal on which a distortion occurring during the time when a short-pulse signal is converted into an optical signal to when the optical signal is converted into a received signal by the optical-to-electrical conversion section (31), is reflected. A template signal generating section (34) 15 generates a template signal which has a waveform on which a distortion similar to a distortion occurring in the received signal is reflected and is in synchronization with the received signal, based on the reception waveform information and a synchronization signal which is in synchronization with the received signal. A 20 correlation section (32) obtains a correlation between waveforms of the received signal converted by the optical-to-electrical conversion section and the template signal to demodulate the pulse signal.